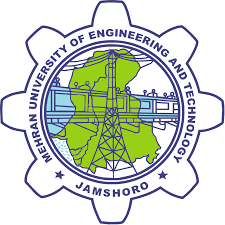
**Mehran University of Engineering and Technology, Jamshoro**

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**Mobile Application Development CEP Report**

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**Submitted To:**

**Ms. Mariam Memon**

News Hub

# Project’s Github Link:

https://github.com/Abdul-Lahad/my-news-hub

# Real World Problem Identification:

In today’s fast-paced world, staying updated with news from reliable sources is crucial. However, users often need to navigate multiple platforms to get relevant news, leading to a fragmented experience. A central hub that aggregates news from various trusted sources is essential. There is a lack of unified and platform-agnostic news applications that cater to users’ needs across devices while maintaining ease of use.

# Proposed Solution:

The proposed solution is a mobile news hub application that aims to address this problem by providing a curated platform for users to access reliable news articles from various sources., providing users with news across categories such as technology, sports, business, and more. The app integrates Firebase for authentication (login/signup), ensuring secure and reliable user management.

**Key Features**:

* News articles from reliable sources, fetched using News API.
* User authentication through Firebase for a personalized experience.
* Responsive design to ensure seamless experience on all devices.

# Responsive User Interface:

**Login Screen:**

**A screenshot of a login form

Description automatically generated**

**Signup Screen:**

**A screenshot of a login form

Description automatically generated**

**Home Screen:**

**A screenshot of a phone

Description automatically generated**

**Details Screen:**

**A close up of a hamburger

Description automatically generated**

**App Running on Android (Samsung S20 Ultra):**

**A screenshot of a phone

Description automatically generated**

**App Running on iPhone (iPhone 14 Pro Max):**

**A screenshot of a phone

Description automatically generated**

**App Running on Tablet (iPad Pro):**

**A screenshot of a computer

Description automatically generated**

# Database Storage:

We have chosen to use Firebase for several reasons:

* **Cloud-based**: Firebase allows secure and scalable storage of user credentials.
* **Cross-platform**: It works well across iOS, Android, and web platforms.
* **Ease of Integration**: Firebase’s SDKs are well integrated with Flutter, making it easy to manage authentication with minimal code.

It provides robust user authentication services, real-time database capabilities and seamless integration with other Firebase services like Firestore.

# APIs/Packages/Plug-ins:

* **News API**: It is used to fetch news articles in real-time, with justification being its ability to provide relevant news from multiple sources. It offers a wide variety of news content from different sources, which aligns with your goal to deliver a diverse news experience.
* **Firebase Authentication**: Chosen for its secure, cloud-based user management system.
* **HTTP Package**: Used to make network calls to fetch news data.
* **Email Validator**: Used to validate email input fields during singup or login.
* **URL Launcher**: Used to launch external URLs from the flutter app.
* **Cupertino Icons**: It provides access to iOS style icons.

# Issues and Bugs Encountered and Resolved During Development

* **Authentication Issues**: We encountered authentication issues during signup and login. To solve this issue, we used proper error handling messages and form validation for each input field.
* **Articles Delay**: In our project, we encountered a limitation with the NewsAPI free tier, which imposes a 24-hour delay on news articles. Unfortunately, due to budget constraints, we were unable to upgrade to the paid tier, which offers real-time news access.